

**REMARKS**

Applicants and the undersigned are most grateful for the time and attention accorded this application by the Examiner. The Office is respectfully requested to reconsider the rejections applied against the instant application in light of the remarks presented below.

Claims 1, 2, 4-8, and 10-18 were pending in the instant application at the time of the outstanding Office Action. Of these, claims 1, 7, and 13 are independent claims; the remaining claims are dependent claims.

Claim 18 stands rejected under 35 USC 112, second paragraph as being indefinite for failing to particularly point and distinctly claim out the subject matter which applicant regards as his invention. Specifically, the claim stands rejected because of the elements utilized in the claimed formula. Applicants respectfully traverse this rejection, asserting that the formula (and its elements) are clearly explained in the pages of the specification leading to the derivation of the formula (as shown on the bottom of page 10 to the top of page 11). Because the Applicant is allowed to be his or her own lexicographer, and Applicant has explicitly defined the elements in the formula in the specification, it is respectfully requested that this rejection be reconsidered and withdrawn.

Claim 1 stands rejected under 35 USC 112, first paragraph for failing to comply with the written description requirement. Specifically, the outstanding Office Action asserts that the limitation “wherein said minimizing step is performed non-incrementally” does not find support in the specification as originally filed. This rejection is respectfully

traversed as well. As the derivation of the objection function is detailed throughout the specification, specifically in the pages leading up to page 11, it is clear that the minimizing step is performed non-incrementally. That is, development and optimization of the objective function is not performed in regular or pre-specified degrees or intervals.

Claims 1, 4-7, and 10-17 stand rejected under 35 USC 102(b) as being anticipated by Wantanabe et al. (hereinafter “Wantanabe”). Claims 2 and 8 stand rejected under 35 USC 103(a) as being unpatentable over Watanabe in view of Chittineni et al. (hereinafter “Chittineni”). Claim 18 stands rejected under 35 USC 103(a) as being unpatentable over Watanabe in view of Decell et al. (hereinafter “Decell”). The Office is respectfully requested to reconsider the rejections presented in the outstanding Office Action in light of the following remarks.

As best understood, Watanabe relates generally to a “Signal Pattern Recognition Apparatus Comprising Parameter Training Controller for Training Feature Conversion Parameters and Discriminant Functions.” (Title) Chittineni, as best understood, appears to be directed toward “[t]he problem of maximization of the divergence between a pair of unequal mean and unequal covariance matrix Gaussian distributed pattern classes.”

(Abstract) However, neither reference teaches or suggests minimizing the probability of subsequent misclassification non-incrementally. The outstanding Office Action asserts that batch processing is equivalent to non-incremental minimizing. However, this batch processing is performed using a gradient method, which is well-known to utilize a rate of change or decreasing percentage, such as in an incremental process. Just because functions are performed in a batch process, in which functions are performed together

instead of separately, this does not necessarily mean that the processing is not incremental. Further, because this batch processing occurs in a gradient method, there is even less evidence that this processing of Watanabe is not incremental. It is thus respectfully submitted that Watanabe falls short of the present invention.

Applicants respectfully submit that the applied art does not anticipate the present invention because, at the very least, “[a]nticipation requires the disclosure in a single prior art reference of each element of the claim under construction.” W.L. Gore & Associates, Inc. v. Garlock, 721 F.2d 1540, 1554 (Fed. Cir. 1983); see also In re Marshall, 198 U.S.P.Q. 344, 346 (C.C.P.A. 1978).

Further, Chittenani fails to overcome the deficiencies of Watanabe as discussed above. Applicants’ respectfully submit any maximization performed in Chittineni is sequential or incremental in nature. Because neither Watanabe nor Chittineni teach or suggest the minimization and optimization of an objective function “wherein said minimizing step is performed non-incrementally” neither reference anticipates the independent claims, since “[a] claim is anticipated only if each and every element as set forth in the claim is found...”. *E.g., Verdegaal Bros. v. Union Oil of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

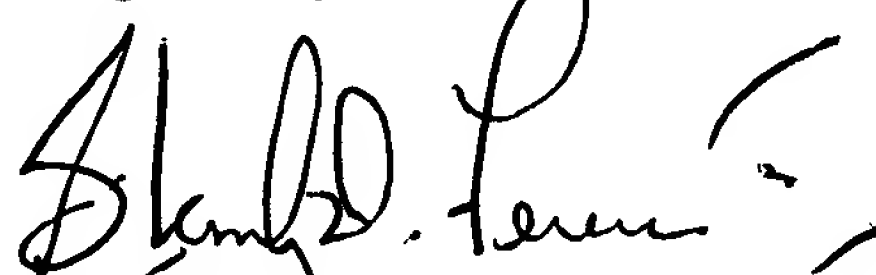
Moreover, Applicants also submit the combination of Watanabe and Chittineni in support of a 35 U.S.C. 103 rejection would also be improper because the claims, as discussed above, are not taught or suggested to one skilled in the art in light of the references. As the Examiner is aware, one of the essential requirements for establishing a

*prima facie* case of obviousness is that the references, either alone or in combination, must teach or suggest to one skilled in the art all of the limitations of an invention as expressed by the claims under consideration. In this instance the art simply fails to teach all the limitations set forth in the independent claims. Therefore, the Applicants respectfully request the withdrawal of the present rejections.

In view of the foregoing, it is respectfully submitted that independent claims 1, 7 and 13 fully distinguish over the applied art and are thus allowable. By virtue of dependence from what are believed to be allowable independent claims 1, 7 and 13, it is respectfully submitted that claims 2, 4-6, 8, 10-12, and 14-18 are also allowable.

In summary, it is respectfully submitted that the instant application, including claims 1, 2, 4-6, 8, and 10-18, is in condition for allowance. Notice to the effect is hereby earnestly solicited.

Respectfully submitted,



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